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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,214	01/26/2001	Royol Chitradon	DE-1213	7354

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EXAMINER

EDWARDS, PATRICK L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 11/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,214

Applicant(s)

CHITRADON ET AL.

Examiner

Patrick L Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

- 1(a). The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2(a). Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, the repeated use of the terminology “means for” is inconsistent with the preamble of the claim, which recites a method.

With regard to claims 1, 10, 15 and 24, the metes and bounds of the term “geocode” are not clear.

With regard to claims 2 and 16, these claims do not further limit the claim that they depend on.

The remaining claims are rejected because they depend from an indefinite claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (US Patent 6,430,498 B1) in view of Budge (US Patent Publication 2002/0080408 A1) and Ogawa (US Patent 5,864,632) and Ratnakar (US Patent 6,278,432 B1).

With regard to claim 15, which is representative of claim 1, Maruyama discloses retrieving geographical map images from an image storage database (Maruyama column 3 lines 35-65). Maruyama

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further discloses compressing data before sending it to the client side (Maruyama column 3 lines 49-52). The portable terminal (element 61 of Figure 9) as disclosed in Maruyama is analogous to a client side as recited in the claim. Maruyama further discloses transmitting map data over a network to a client side (Maruyama column 9 lines 5-27 in conjunction with Figure 9). Maruyama also discloses displaying raster images using one of either spatial information and a map viewer or spatial information and a map editor (Maruyama column 3 lines 50-64). The portable terminal as disclosed in Maruyama is analogous to a map viewer as recited in the claim because it displays the spatial information (or "entire map data" as stated on line 61 of column 3). Maruyama further discloses sending queries to a spatial database based on user requirement (Maruyama column 5 lines 30-39 in conjunction with Figure 2). The retrieving conditions set by the user and shown in element 103 of Figure 2 as control input, are analogous to queries as recited in the claim. Maruyama further discloses retrieving vector data comprising of geographical elements from the database (Maruyama column 5 line 63 – column 6 line 5). The retrieval of a route between a present place and a destination as disclosed in Maruyama is analogous to vector data comprising of geographical elements as recited in the claim in that data corresponding to distance and direction to a location is retrieved. This is further shown on lines 45-51 in column 6 of Maruyama.

With respect to step (j), the claim recites retrieving information from a spatial database using metadata and geocode of the coordinate related with the geographical elements on the vector data. In this particular environment, the term metadata simply means data that provides information about the image data that is being retrieved. Maruyama discloses using metadata in the retrieval of map information corresponding to a certain location (Maruyama column 5 line 48 – column 6 line 4). The location information, direction information and retrieval conditions as disclosed in Maruyama are all analogous to metadata as recited in the claim in that they are providing information about the image data being retrieved. Further, the geocode of a coordinate is defined as the demographic characterization of that particular locality. Maruyama discloses retrieving information about the movies, entertainment, business

events, restaurants, etc. that corresponded to a particular locality (Maruyama column 3 lines 47-49). This information is analogous to the geocode of a coordinate as recited in the claim.

Maruyama also discloses a management information system (Maruyama column 9 lines 14-18 and Figure 9). The database management system as disclosed in Maruyama is analogous to the management information system as recited in the claim. Although Maruyama does not expressly disclose that geographical information is stored in the management information system, any database management system would have to store geographical information in order to successfully serve the purpose of managing the database. As a result, the storing of geographical information is inherent in the functioning of the management information system. Maruyama also discloses a spatial database that stores vector data (Maruyama column 9 lines 24-25). The map information as disclosed in Maruyama is analogous to vector data as recited in the claim. Maruyama further discloses storing geographical map information (Maruyama column 3 lines 45-48).

Maruyama fails to expressly disclose a system with a spatial database used for storing vector data and a geographical map image storage database for storing geographical raster map or satellite image. Maruyama only discloses one storage means, which is referred to as the spatial information database. This spatial information database, however, is responsible for storing the two types of image data recited in the claim. Rather than separating geographical image data into a raster component and a vector component and storing the two components in separately named storage devices, Maruyama discloses one storage device for storing geographical image data in general. The geographical image data disclosed in Maruyama is no different from the geographical image data recited in the claim. The applicant merely separates the data into the two components.

Maruyama also fails to expressly disclose the compression and transmission method that the applicant recites in parts (b)-(f) of the claim. Maruyama does mention the compression of the image data and then the transmission of that image data over a network, but does not disclose a method. Budge,

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however, discloses a method for compressing images for the purpose of transmission over a network and then reconstructing the image at the remote location (Budge paragraph 34 lines 1-7). Budge discloses transforming raster images into wavelet data stream, which is completely retransformable back to the original raster images (Budge paragraph 34 line 7 – paragraph 35 line 4). Budge also discloses compressing the wavelet data format stream into the compressed data stream (Budge paragraph 36 lines 4-11) and then transmitting the compressed data stream over a network to the client side (Budge paragraph 34 lines 5-7). Budge also discloses decompressing the compressed data stream into wavelet data stream and then retransforming the wavelet data stream into the raster images (Budge paragraph 88 in conjunction with Figure 8). It would have been obvious to one reasonably skilled in the art at the time of the invention combine the method of transforming an image into wavelet data, compressing the wavelet data, transmitting the compressed data over a network, decompressing the data into wavelet data and then retransforming the wavelet data back into image data as taught by Budge with Maruyama's broadly stated compression and transmission system. Such a modification would have allowed for a fast, efficient method of compressing image data (Budge paragraph 10 lines 6-10) that is well known in the art as a way to speed up the transmission of image data over a network (Budge paragraph 4).

Maruyama also fails to expressly disclose that the geographical map images contain individual raster images of the map divided from the whole map sheet or satellite image. Ratnakar, however, discloses retrieving individual raster images of the map divided from the whole map sheet or satellite image (Ratnakar column 3 line 53 - column 4 lines 7). The portion of an image or image "tile" as disclosed in Ratnakar is analogous to the individual raster images as recited in the claim. It would have been obvious to one reasonably skilled in the art at the time of the invention to combine the retrieving of portions of a larger map as taught by Ratnakar with Maruyama's method of retrieving map information based on location (Maruyama column 4 lines 6-9). Such a modification would have allowed for a method

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of only retrieving the map information that the user requires and therefore transmitting only the required amount of data across the network. This would have made for a more efficient system.

Maruyama also fails to expressly disclose means for editing information or vector data using spatial information and a map editor. Ogawa, however, discloses editing map information using spatial information and a map editor (Ogawa column 2 lines 8-14). The image obtained by imaging the area as disclosed in Ogawa is analogous to spatial information as recited in the claim. It would have been obvious to one reasonably skilled in the art at the time of the invention to combine the map editor as taught by Ogawa with Maruyama's map viewing and navigation system. Such a modification would have added the extra functionality to Maruyama's system by allowing the map image data to be altered as well seen and utilized. This would have made for a more dynamic system that could be updated to keep all the information current.

With regard to claim 16, which is representative of claim 2, Murayama discloses a geographical map in the form of map information (Murayama column 3 line 46). This is a form of a map.

With regard to claim 17, which is representative of claim 3, Budge discloses a wavelet transformation used to transform a map into various resolutions (Budge paragraph 9 lines 8-9).

With regard to claim 18, which is representative of claim 4, the claim recites that the various resolution maps can be filtered for only the desired resolution. Given a system with a map viewer that displays an image at a given resolution and a wavelet transform used to transform a map into various resolutions, the filtering of the various resolution maps for only the desired resolution is inherent.

With regard to claim 19, which is representative of claim 5, Budge further discloses that filtered maps are compressed by using compression algorithms (Budge paragraph 52).

With regard to claim 20, which is representative of claim 6, Maruyama further discloses using an internet network to transfer compressed data (Maruyama element 65 of Figure 9).

With regard to claim 21, which is representative of claim 7, Budge further discloses the decompression of compressed data into wavelet data format (Budge paragraph 88).

With regard to claim 22, which is representative of claim 8, Budge further discloses that wavelet format data is retransformed into a digital image such as a geographical map (Budge paragraph 88).

With regard to claim 24, which is representative of claim 10, steps (a) and (d) have already been addressed above. The claim further recites storing map geocode that links to the information in the MIS. The use of geocode has already been addressed with respect to claim 1. Arguments have also been made above with respect to a spatial information database that stores data such as geocode and an MIS (referred to as database management system in Maruyama) that manages the information stored in the spatial database. As a result, geocode stored in a spatial database inherently links to the information in the MIS. In addition, sending geocode to the MIS information is also inherent in such a system.

With regard to claim 25, which is representative of claim 11, the use of metadata in the retrieval of information from the spatial database has been addressed with respect to step (j) of claim 1.

With regard to claim 26, which is representative of claim 12, it is well known in the art that the term "metadata" refers to data which explains the meaning of data as well as its logical structure. This has been addressed above with respect to step (j) of claim 1.

With regard to claim 27, which is representative of claim 13, the claim recites that the required data is compressed and sent back to the client. The compression of data for the purpose of sending the data to a client has been addressed above with respect to claim 1.

3. Claims 9, 14, 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Maruyama, Budge, Ogawa and Ratnakar as applied to claim 1 above, and further in view of Yonezawa (US Patent 6,542,191 B1). The arguments as to the relevance of said combination as applied in paragraph 2 above are incorporated herein.

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With regard to claim 23, which is representative of claim 9, steps (a) and (c) have already been addressed in paragraph 2 with respect to claim 1. The further limitation recited in step (b) that the user controls the zooming and panning of the image is not expressly disclosed in the aforesaid combination. Maruyama discloses that the user controls conditions related to the display of map image data, but does not expressly mention zooming and panning as possible functions. Yonezawa, however, discloses receiving user input (the user inputs information using various buttons as described on column 6 lines 55-57 of Yonezawa) to control the zooming and panning of a map image. It would have been obvious to one reasonably skilled in the art at the time of the invention to combine the user controlled panning and zooming functions as taught by Yonezawa with the user controlled map display system taught by the aforesaid combination. Such a modification would have added an extra feature to a map display system and would have made such a system more robust, user friendly and generally useful.

With regard to claim 28, which is representative of claim 14, all of the steps have been previously addressed except for steps (f)-(h), which deal with the storing of changed or new information. The combination of Maruyama, Budge, Ogawa, Ratnakar and Yonezawa teaches the editing of map data, allows for a user to change query information, discloses a management information system, a spatial database and a geographical map image storage. The further limitations are all inherent given a system such as this. The changed user information would have to be stored in the management information system because the management information system determines what image data is sent to the user for display. In addition, the changed vector data would have to be stored in the spatial database since the spatial database is responsible for storing the vector data portion of the image. Further, the new geographical image map data would have to be stored in the geographical map image storage given that the geographical map image storage is responsible for storing this portion of the image.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (703) 305-6301. The examiner can normally be reached on 8:30am - 5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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